

Creating Safer and More Complete Streets in Rural Communities

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Local Government Commission

Meadow Vista, CA

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What is the Purpose of Towns and Cities?



Towns and Cities are an invention to maximize exchange (of goods, culture, friendship, knowledge) and to minimize travel.

The role of transport is to maximize exchange.



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Creating an Inviting Sense of Place

Before

3



Creating an Inviting Sense of Place

After

4

Would you rather spend time here...



5

...or here?



6

People want transportation options

Important things when deciding where to live...	Important (very or somewhat)	Not Important
→ Sidewalks and places to take walks	86%	14%
→ Being within an easy walk of other places and things in the community	80%	20%
Easy access to the highway	80%	20%
Being within a short commute to work	74%	26%
Having public transit nearby	62%	38%
→ Bike lanes and paths nearby	54%	46%
→ Separated bike paths or trails	53%	47%

Q10-16. If you were deciding today where to live, please indicate how important are each of the following?

National Association of Realtors, Portland State University, Community and Transportation Preferences Survey, September 2017

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Complete Streets



Complete Streets are streets for everyone, no matter who they are or how they travel.

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Complete Streets

Safe



Comfortable



Convenient



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Complete Streets

Safe



Comfortable



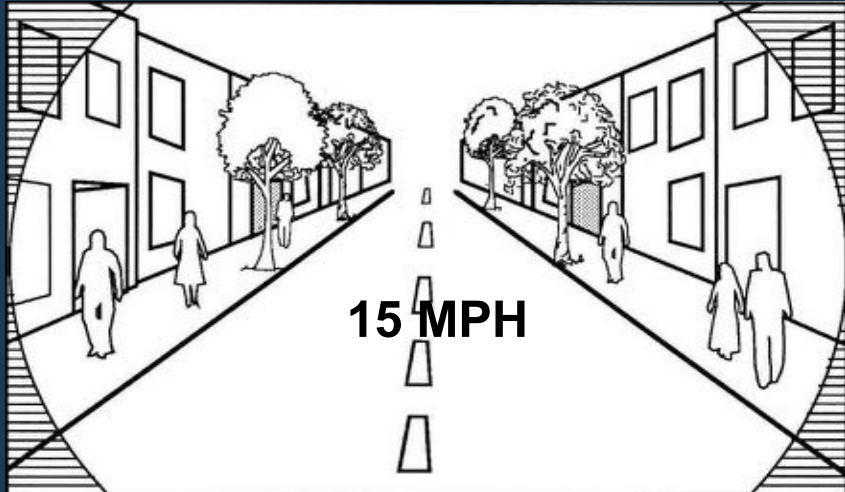
Convenient



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Speed Matters

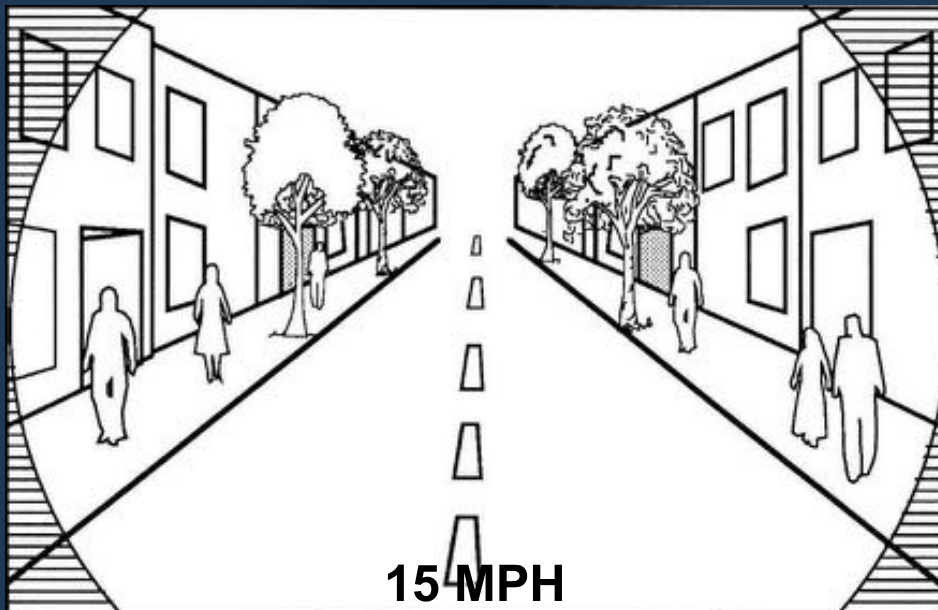
- Drivers' field of vision and ability to see pedestrians
- Drivers' ability to react and avoid a crash
- Crash Severity



Designing for Pedestrian Safety – Crossing Principles

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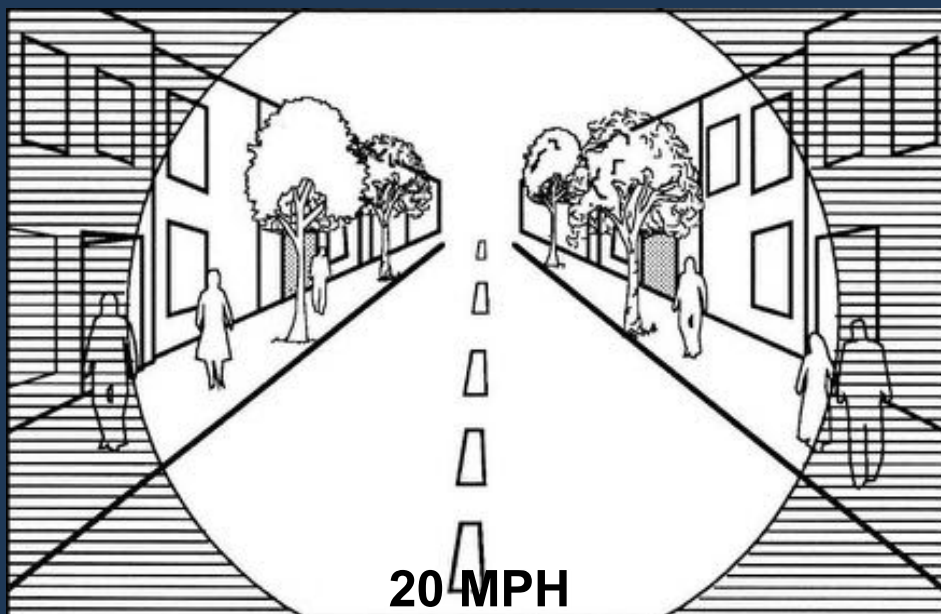
As speed increases, driver focuses less on surroundings



Designing for Pedestrian Safety – Crossing Principles

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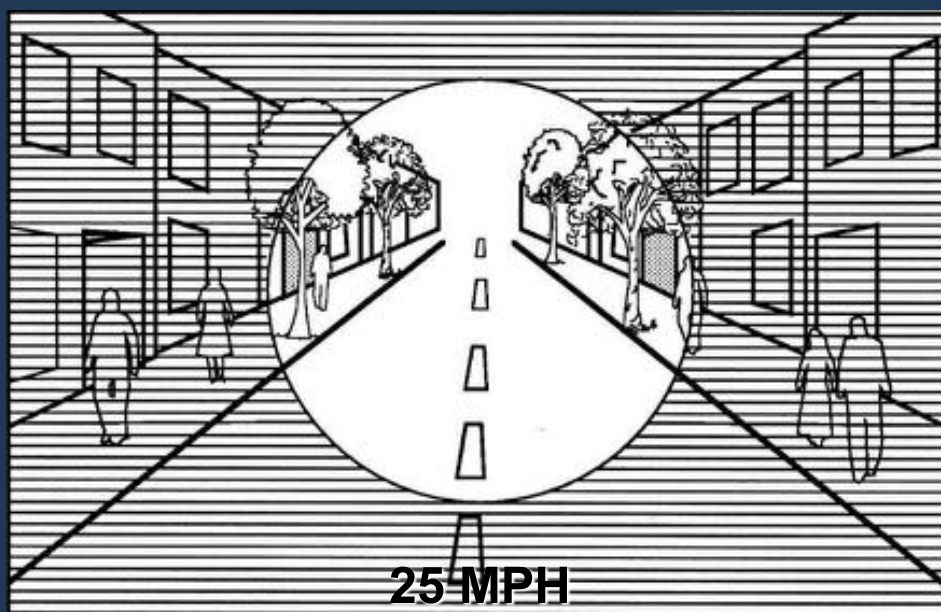
As speed increases, driver focus less on surroundings



Designing for Pedestrian Safety – Crossing Principles

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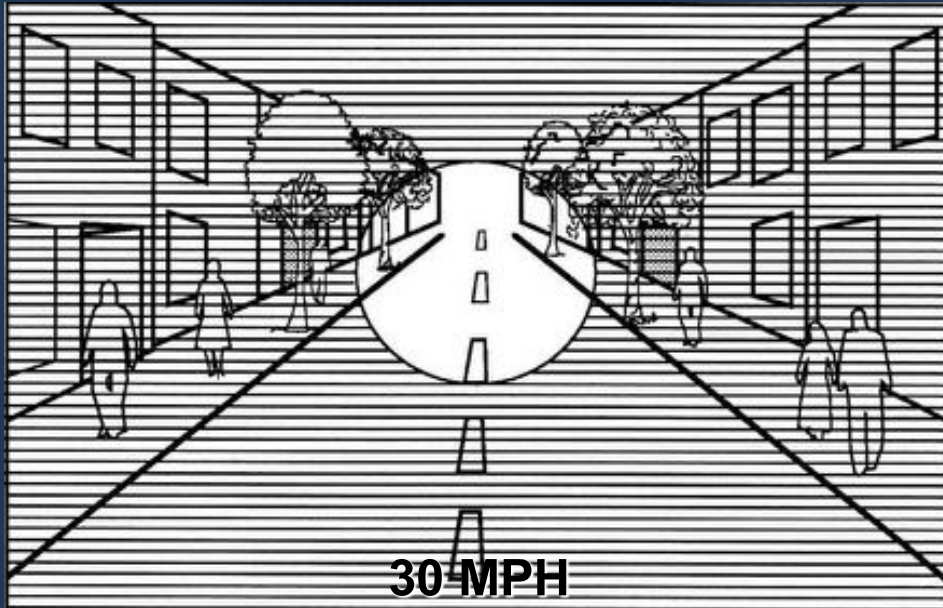
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Designing for Pedestrian Safety – Crossing Principles

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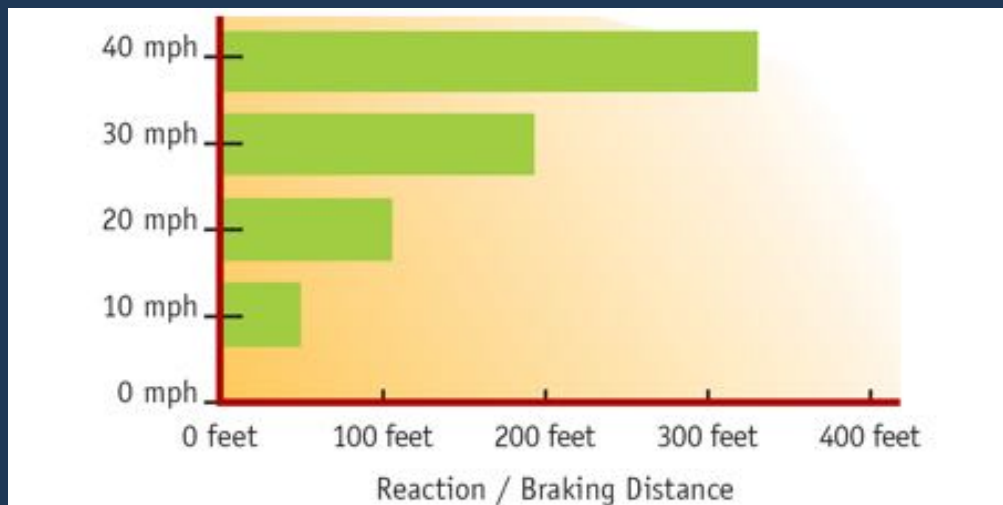
As speed increases, driver focus less on surroundings



Designing for Pedestrian Safety – Crossing Principles

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Speed Affects Crash Avoidance



High speeds result in greater reaction and stopping distance

Designing for Pedestrian Safety – Crossing Principles

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Speed Affects Crash Severity



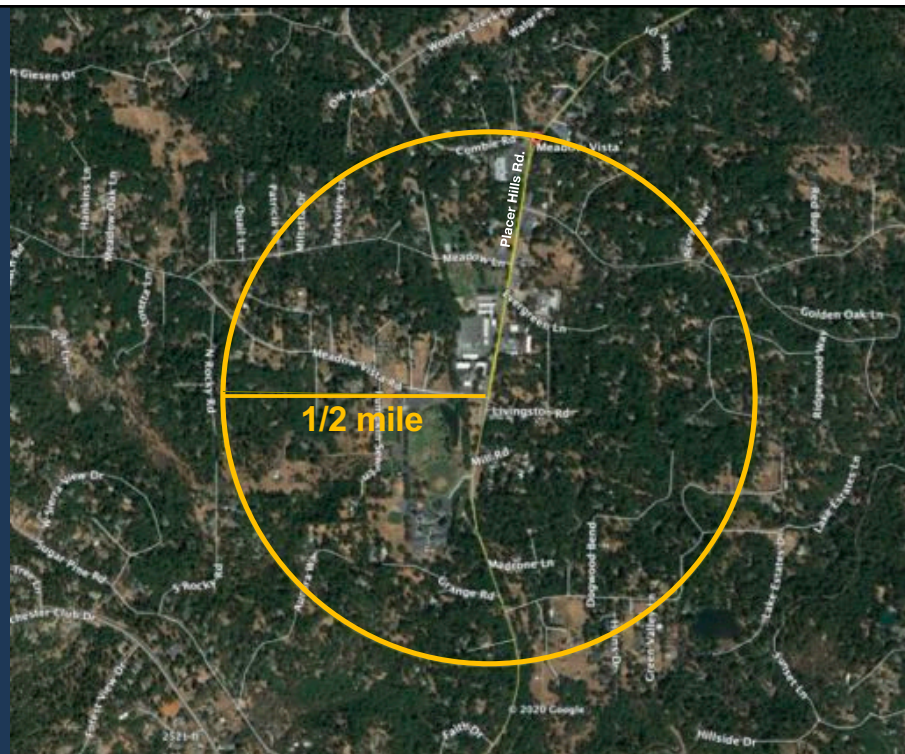
W.A. Leaf and D.F. Preusser, "Literature Review on Vehicle Travel Speeds and Pedestrian Injuries Among Selected Racial/Ethnic Groups," US Department of Transportation, National Highway Traffic Safety Administration (1999).

Designing for Pedestrian Safety – Crossing Principles

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Walking in
Meadow
Vista:

$\frac{1}{2}$ mile
10-12 minute
walk



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Walking in
Meadow Vista:

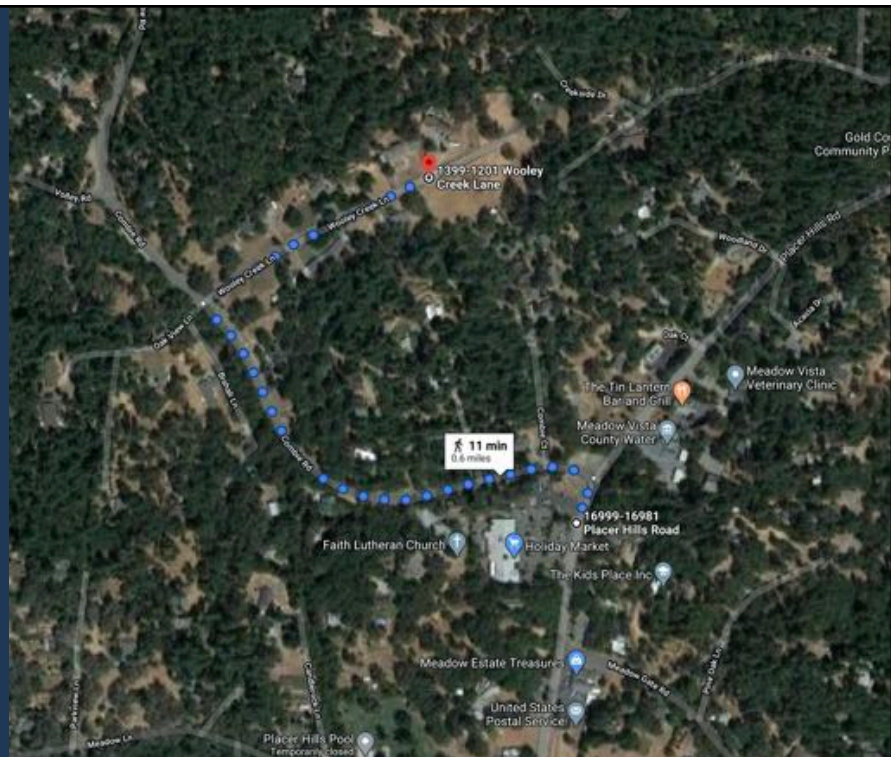
0.4 mile
9 minute walk



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Walking in
Meadow Vista:

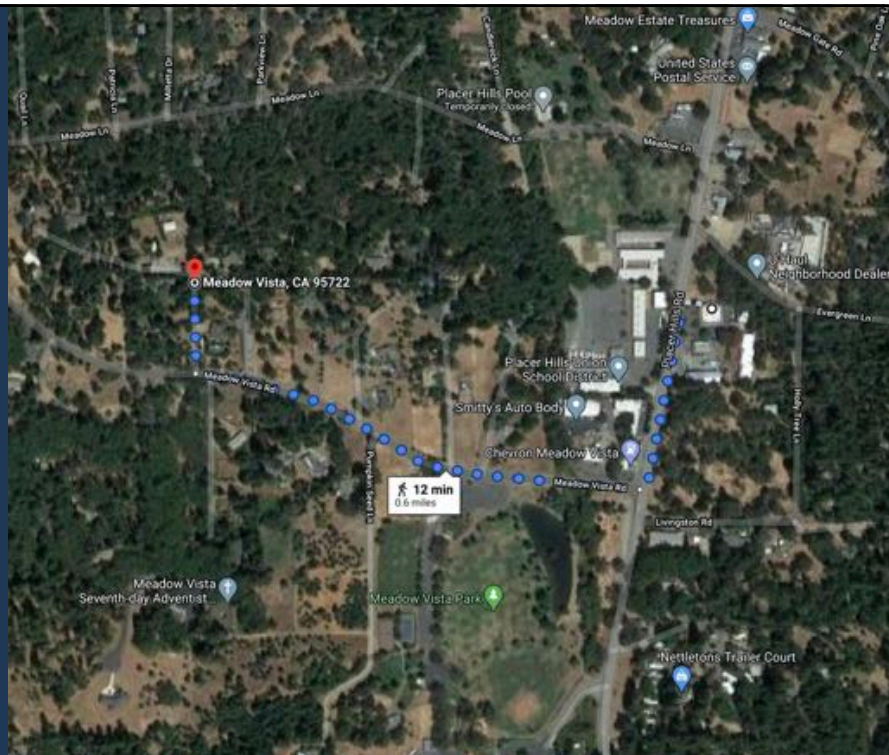
0.6 mile
11 minute walk



20

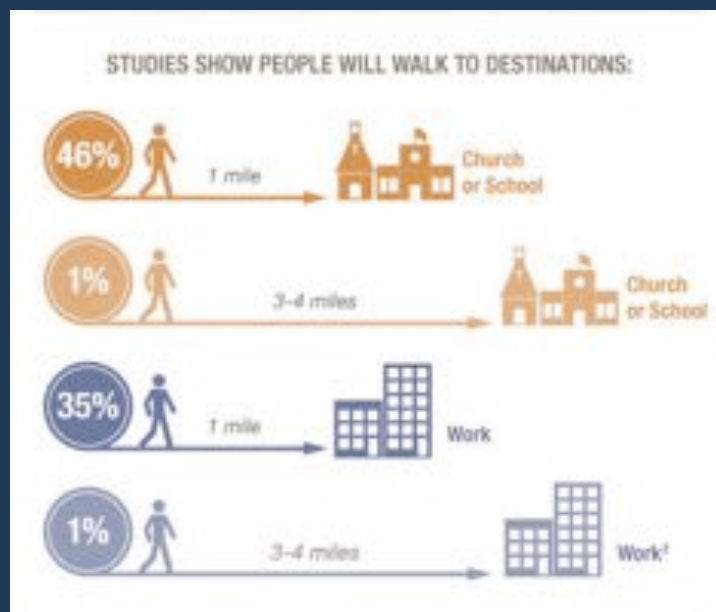
Walking in Meadow Vista:

0.6 mile
12 minute walk



21

People will walk

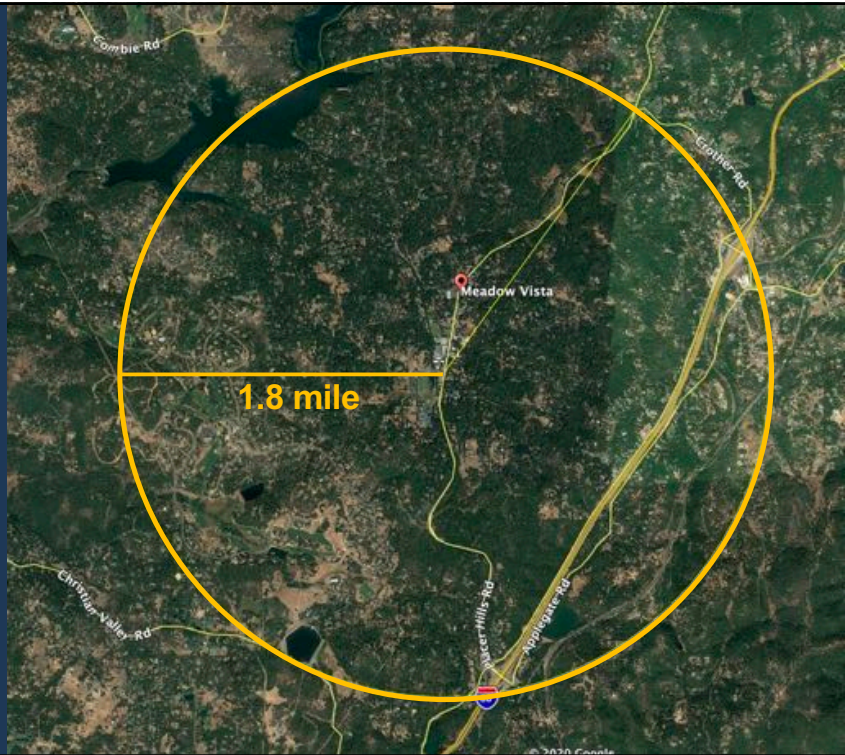


Centers for Disease Control and Prevention 2012, newpublichealth.org

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Bicycling in Meadow Vista:

1.8 mile
10-12 minute ride
(at 10mph)



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Bicycling in Meadow Vista:

1.2 mile
6 or 9 minute ride

Holiday Market to Flower & Berry Farm

via Cole Rd and Placer Hills Rd 6 min
1.2 miles

[DETAILS](#)

↑ 20 ft · ↓ 144 ft

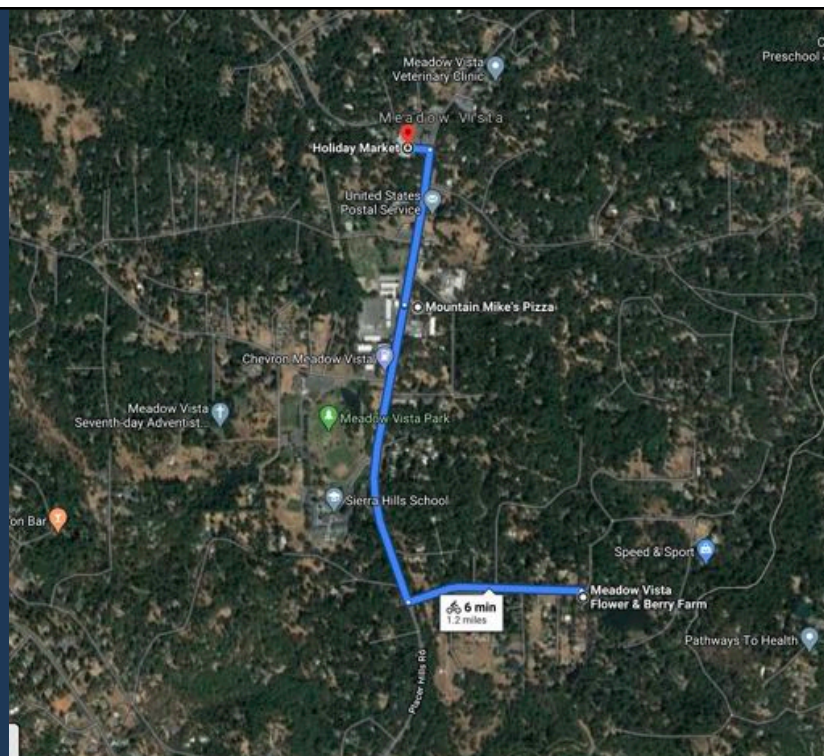


Flower & Berry Farm to Holiday Market

via Placer Hills Rd 9 min
1.2 miles

[DETAILS](#)

↑ 148 ft · ↓ 20 ft



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Bicycling in Meadow Vista:

2.6 mile
17 or 25 minute
ride

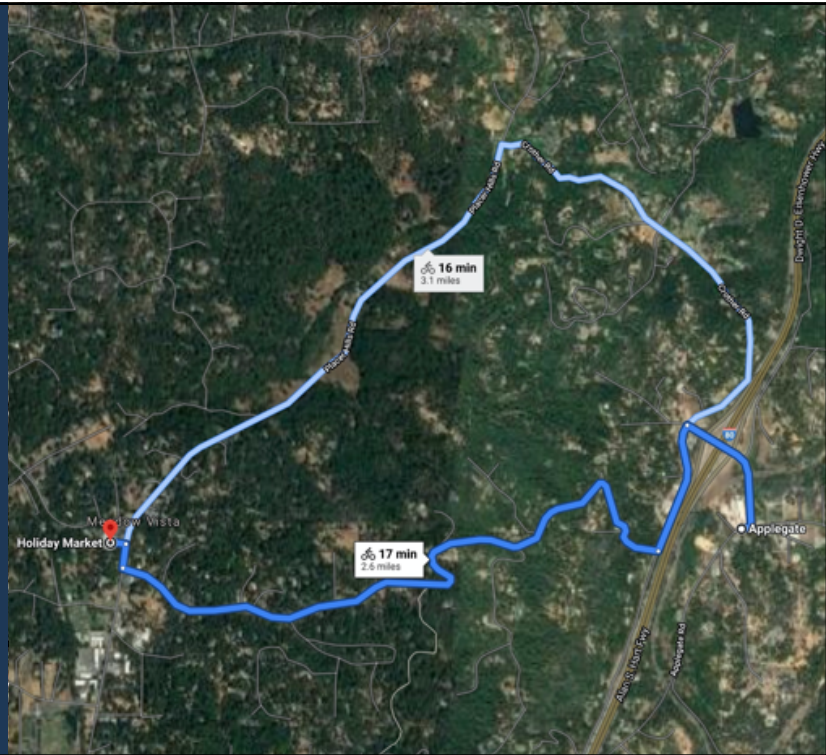
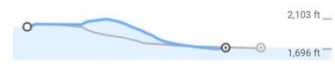
Applegate to Holiday Market

via Meadow Gate Rd 17 min
2.6 miles

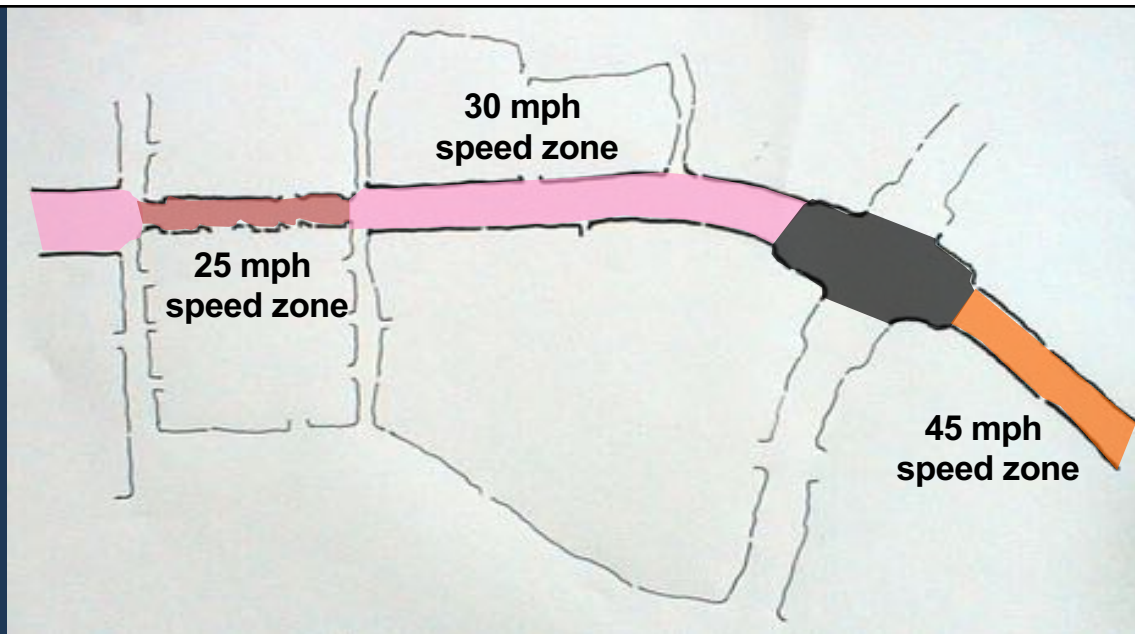
[DETAILS](#)

via Crother Rd and Placer Hills Rd 16 min
3.1 miles

↑ 131 ft - 4 413 ft

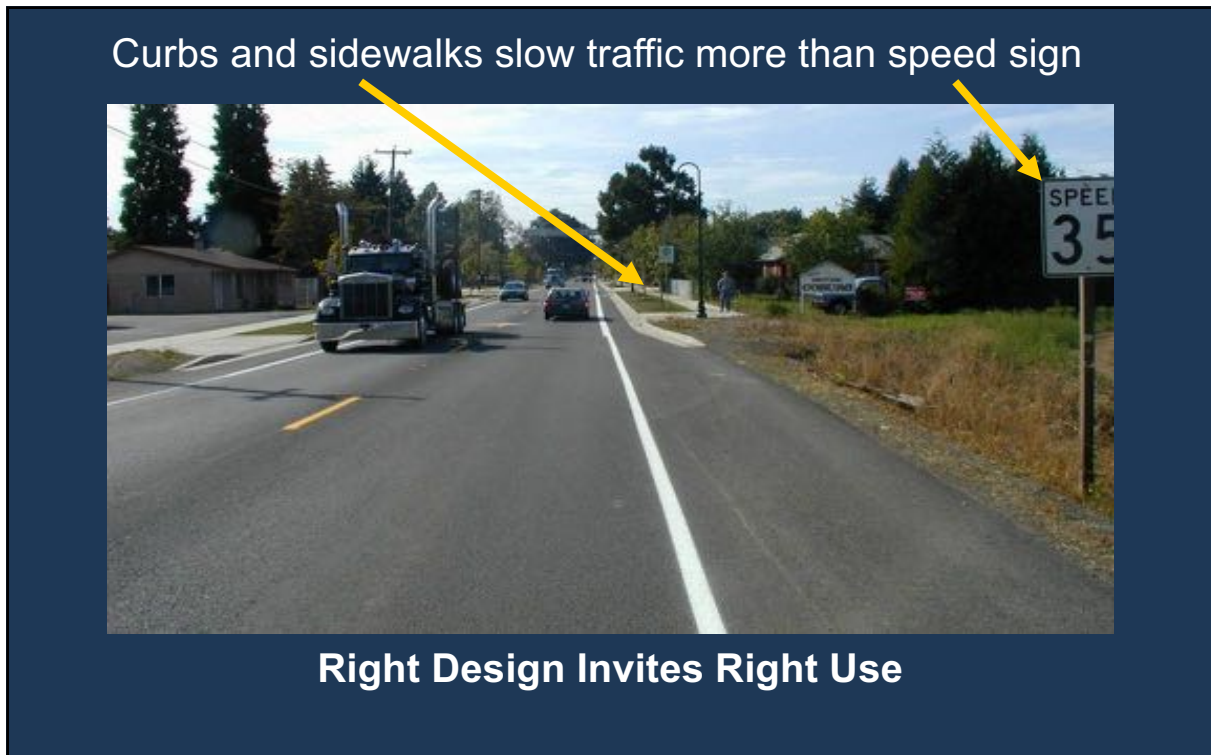


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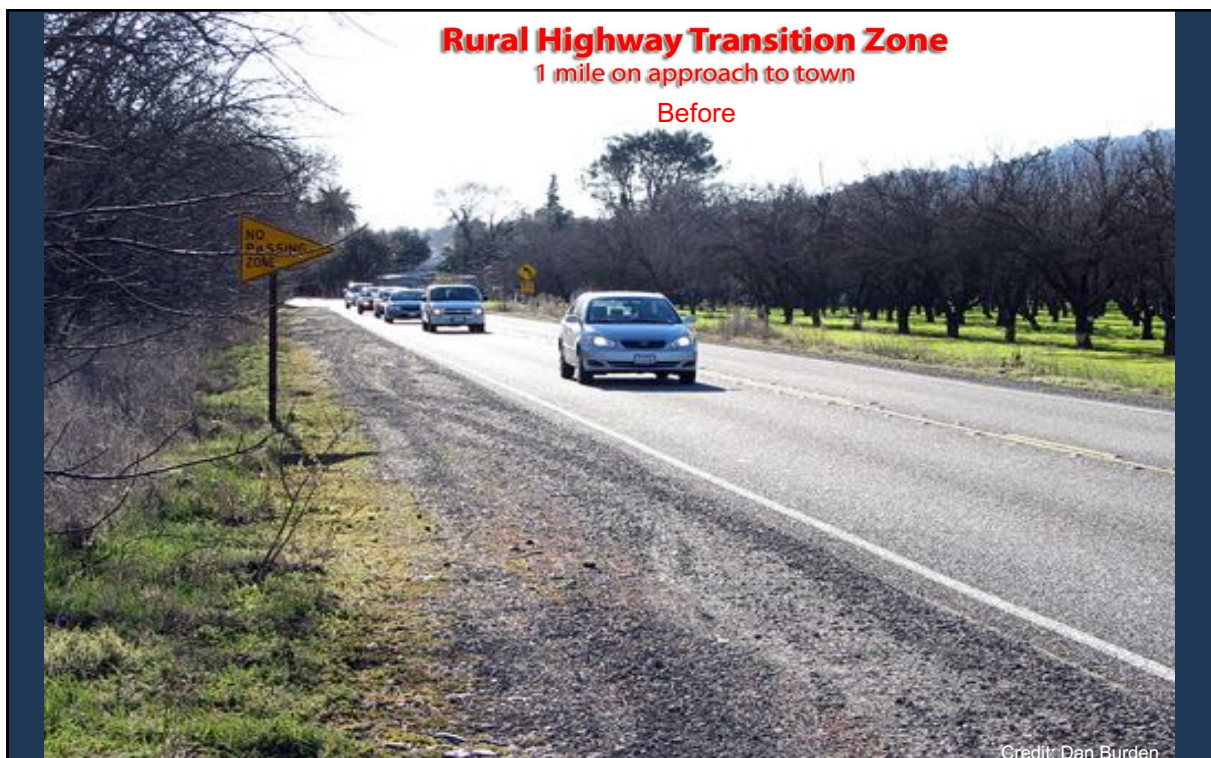


Streets need to be designed to relate to the context

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Treatment in a rural context to slow vehicle speeds



State Route 16, Capay, CA

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State Route 16, Capay, CA

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State Route 45, Princeton, CA (Colusa County)

32



State Route 45, Princeton, CA

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Gateways



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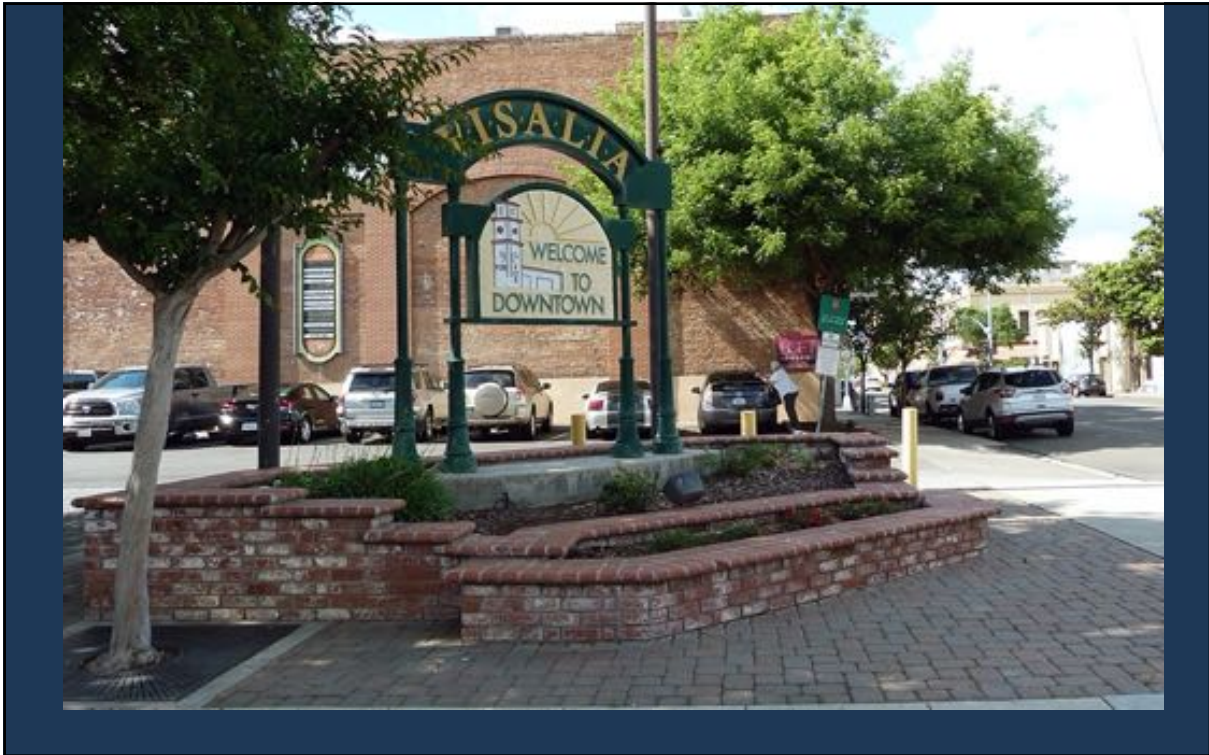


Gateways

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Roundabouts can create great gateways, while reducing vehicle speed

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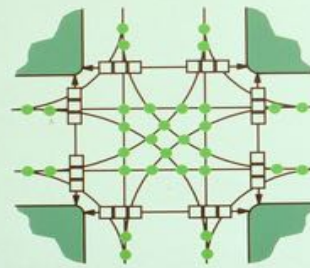


Roundabout design characteristics

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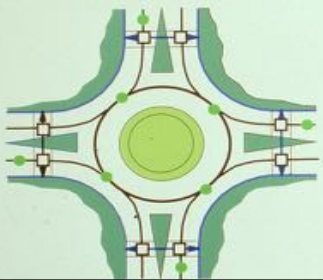
Roundabouts are safer

Conflicts at a 4-way intersection



- 32 vehicle to vehicle
- 24 vehicle to pedestrians

Conflicts at roundabouts



- 8 vehicle to vehicle
- 8 vehicle to pedestrians

“Results of this study indicate that converting conventional intersections from stop sign or traffic signal control can produce substantial reductions in motor vehicle crashes.”

March 2000 Study by the Insurance Institute for Highway Safety

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Tools to help pedestrians walk along and cross the street

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Shoulders improve safety for all users



For pedestrians:
▪ A place to walk

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At a certain point, sidewalks are needed

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For two people to walk comfortably side-by-side we need sidewalks that are at least 5-feet wide.

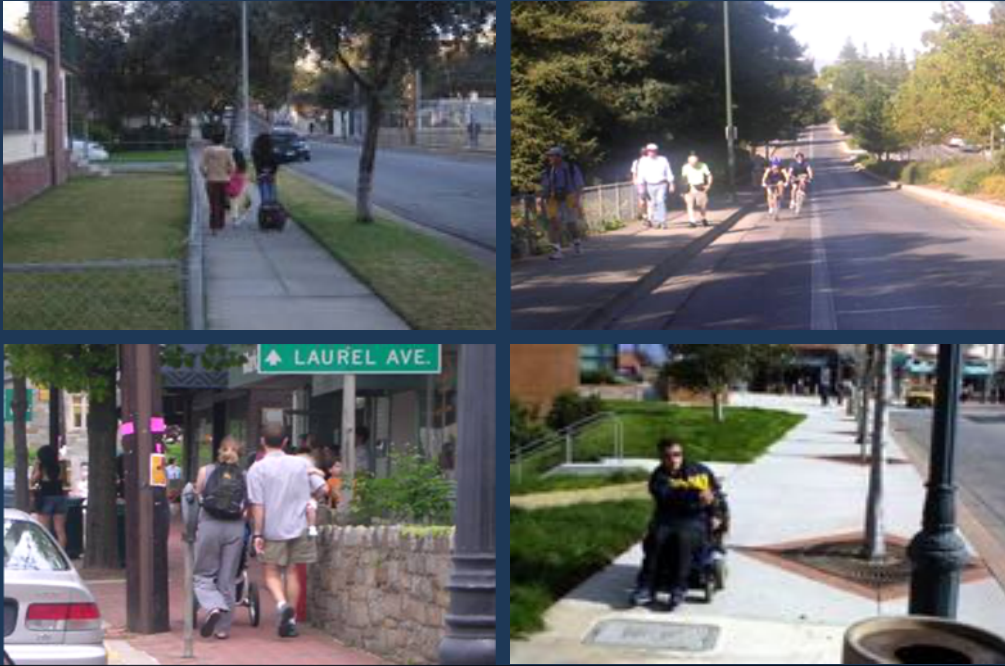
45



For two people to walk comfortably side-by-side we need sidewalks that are at least 5-feet wide.

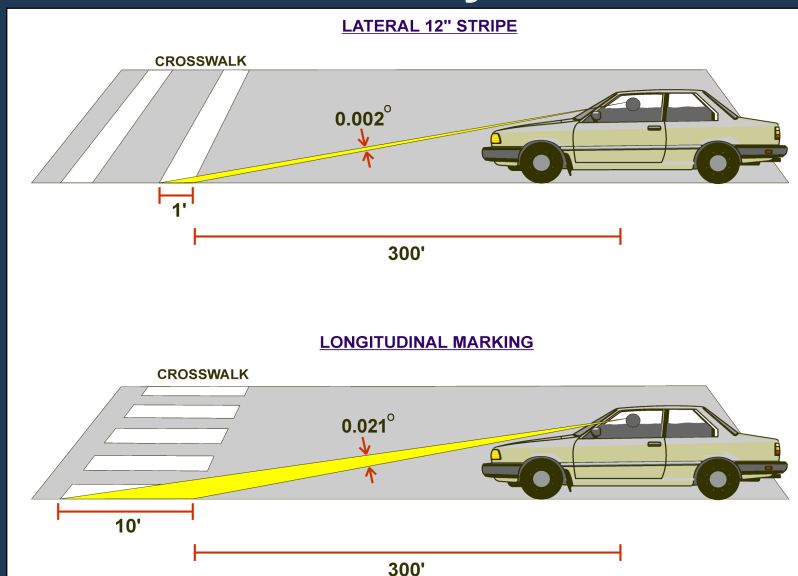
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Sidewalks need good buffers



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Crosswalk Visibility



Longitudinal markings are more visible to driver at a distance

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State Route 45, Princeton, CA

Treatment in a rural context to help cross the street

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Crossing Islands



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Treatments to Help Pedestrians Cross the Street

Rectangular Rapid Flashing Beacon: Supplement warning signs at unsignalized intersections or mid-block crosswalks.

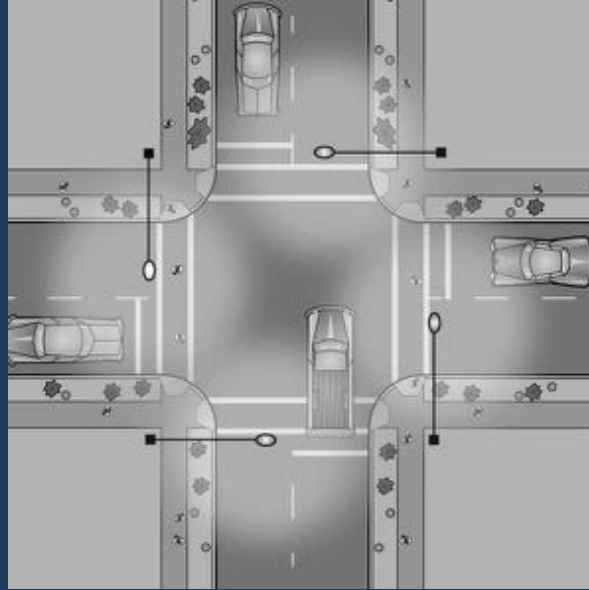


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Illumination — Essential for any Crossing

If you mark a crosswalk — light it.

- Almost 50% of pedestrian crashes occur at night



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Tools to help make bicycling safe and comfortable

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Bicycling in the U.S.

What the Research Tells Us



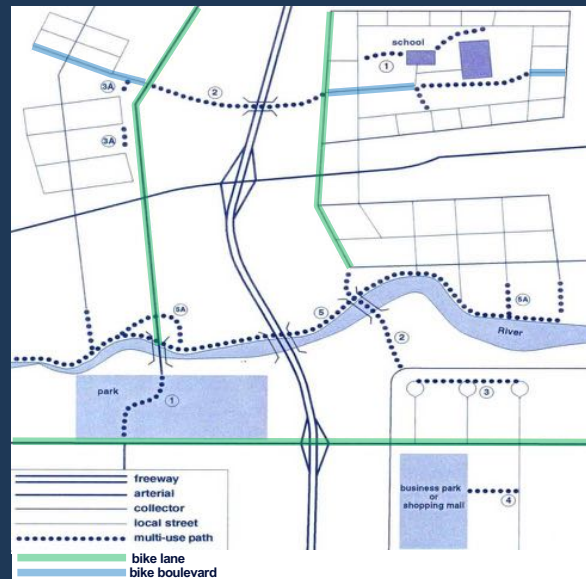
Typically only about 8% of cyclists are willing to ride in standard (Class II) bike lanes

Graphic Courtesy: Fehr & Peers

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Bikeway Network

- Complete Streets require a complete network for cyclists
- Just like roads and sidewalks, bikeways need to be part of a connected network.
- OK to combine various bikeway types, including on and off-street facilities



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Shoulders improve safety for all users

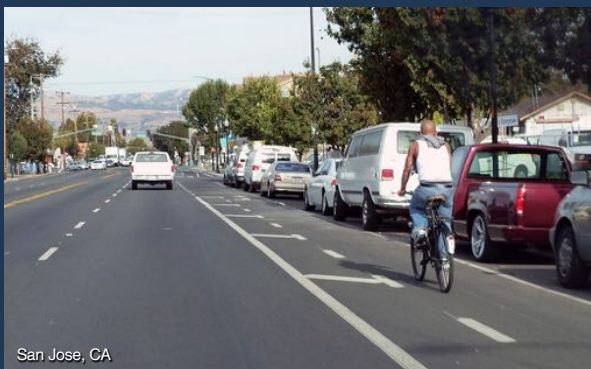


For bicyclists:

- A place to ride

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Buffered bicycle lanes



San Jose, CA



Davis, CA

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Trails can Provide Great Connectors and Amenities in Rural Areas

Look for opportunities to create and enhance trails



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Trails Alongside Roads/Highways



Davis, CA



Seward Highway, Alaska

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Photo Simulations

Examples from Ventura County and Shasta County

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Pedestrian / Visual Improvements to Highway 33



Sargent Town Planning

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Pedestrian / Visual Improvements to Highway 33



Sargent Town Planning

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Pedestrian / Visual Improvements to Highway 33



Sargent Town Planning

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Pedestrian / Visual Improvements to Highway 33



Sargent Town Planning

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Gateway from Highway to Town



Sargent Town Planning

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Gateway from Highway to Town



Sargent Town Planning

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Gateway from Highway to Town



Sargent Town Planning

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Gateway from Highway to Town



Sargent Town Planning

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Parking Lot / Pedestrian Improvements



Sargent Town Planning

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Parking Lot / Pedestrian Improvements



Sargent Town Planning

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Happy Valley, CA Happy Valley Road



72

Happy Valley, CA
Happy Valley Road



Photo Simulation: Urban Advantage

73

Happy Valley, CA
Happy Valley Road



Photo Simulation: Urban Advantage

74

Happy Valley, CA
Happy Valley Road



Photo Simulation: Urban Advantage

75

Happy Valley, CA
Happy Valley Road



Photo Simulation: Urban Advantage

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Examples of: Tactical Urbanism aka, DIY Urban Repair aka, Temporary Installations

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Paso Robles —Temporary Protected Bicycle Lane

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Salinas —Temporary Parklet

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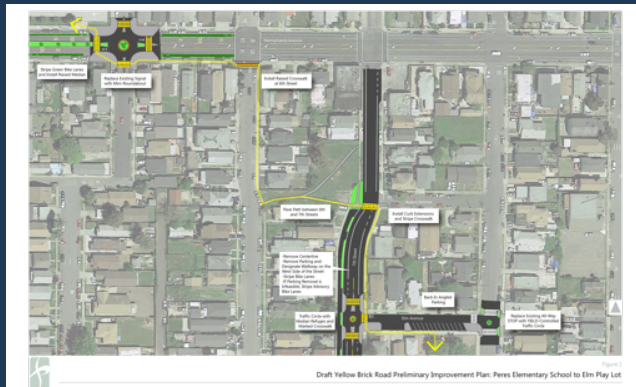
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Richmond, CA — Yellow Brick Road

Initial Concept —
Neighborhood
Play Street



Preliminary
Improvement Plan



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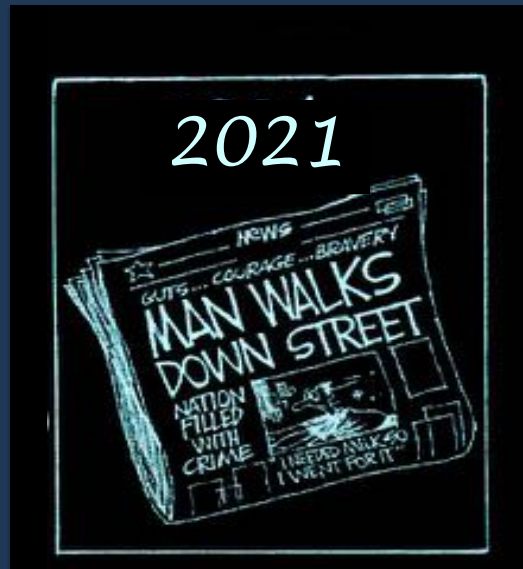


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Can it be done?



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